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The role of a brick detail in architecture on the example of contemporary architectural trends in Upper Silesia

Introduction

Brick has established its position as a material that can be classified as timeless [1, p. 8]. It is a concept of a building system that has been successfully operating for thousands of years [1, p. 8]. Brick is an environmentally friendly material and free of harmful chemicals. It has high mechanical strength and resistance to weather conditions. *It has the ability to accumulate heat, providing a pleasant and favourable microclimate* [2, p. 217]. It is very plastic and susceptible to forming. Depending on the colour, format, binding or brick solution employed, brick can be used in any style and atmosphere. On the one hand, it refers sentimentally to the past, while on the other hand, it surprises us with its modernity. It combines austerity with delicacy and warmth in an interesting way. It can soften the ascetic shape of the building or give it a slightly “rough” character. The rich colours of the brick fit in with modern architecture. *2023 marks 814 years since building ceramics began to be popularized in Poland* [3, p. 26].

Knowledge of production technology came to Polish lands from the West; mainly from Italy, the Netherlands, Denmark and Saxony. Local brickmakers, following the example of Western builders, began to acquire the ability to form and fire bricks and to produce them on a larger scale. The Industrial Revolution in the 19th century saw a huge leap in brick production with the invention of new kilns and mechanical manufacturing techniques that laid the foundations for many variants of the modern perforated bricks of the 20th century. Unlike the oldest air-dried bricks, the “modern” brick, thanks to a complex firing

process that lasted from 8 to 15 hours at a constant temperature of 900 to 1150°C, became hard and resistant to water. Until the beginning of the 19th century, bricks were shaped by hand and excess clay from a wooden template, and later from the moulding box, was first removed by hand (“finger brick”), and later with a wooden stick (“scrapper”). The bricks were then stacked in a firing chamber.

The so-called dry pressing process in which the clay was first kneaded by a machine and then forced into a mould under considerable pressure was the first mechanical method of brick formation. The extrusion process, which Johann Georg Degerlein patented in England in March 1810, turned out to be very effective: the inventor’s machine pressed the moist clay mass through a mould, from which a rectangular strip cut into single bricks emerged.

Smooth, uniform bricks could be laid with very narrow joints, which aroused mixed feelings among architects. On the one hand, they appreciated uniformity, on the other hand, they missed the original texture and unique character of hand-made bricks.

More complicated decorative elements began to be made of it. Brick turned out to be durable as a construction material and after non-standard shaping and glazing, so noble that it became a willingly used finishing and decorative material.

For Silesia, the period at the turn of the 19th and 20th centuries was the peak of economic development. It was with the use of brick that mine buildings were built, and then, successively, workers’ housing estates, houses, public buildings and schools.

Due to the already existing context, the sentiment for using the brick – a material with an aesthetic form and high durability, made it often used in the design of modern buildings. *Brick has multiple possibilities of expression that can be read in many different ways: as a construction rule, as a design element, as an atmospherically complex*

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surface [1, p. 47]. *The rich colours and size of the formats make the brick fit perfectly into any architecture* [4, p. 72]. The colour of the brick depends on the type of clay used. The use of local minerals emphasizes the colour of traditional local architecture. *It can be glazed, refined, fired and fixed in various ways* [5, p. 23]. A brick is said to be “tailor-made for people” – [...] *it has a width, length, height and weight designed so that one hand can comfortably grab a brick and with the other trowel mortar to make a joint with another brick* [6, p. 332]. With this practical module, houses and entire cities were built, and the small scale of a single brick translated into a very large spatial element. No matter how large a house or city district is, the correlations with the small scale of the building material have always been evident. The single brick that everyone knows is fixed in the pattern of laying whole elements from these single modules. This pattern has firmly established itself in the architectural identity of Silesia.

Architects want to preserve the culture and tradition of Upper Silesia, which is why brick often “calls the tune” in the best architectural projects of this region. For the needs of contemporary architecture and its style, ceramic brick is used in the form of cladding, simplified detail, openwork and decorative elements. Simplicity, timelessness and the possibility of using the brick to build both small and large-scale buildings make it a material used in the construction of contemporary architectural projects not only in Upper Silesia, but also throughout Poland.

Objective and research issues

The aim of the article is to organize knowledge about changes in the way the bricks are used and the evolution of the ceramic detail in the contemporary architecture of Upper Silesia. Once, brick was used only to build details of massive structures, but over time it has been modified in this way and is successfully used to create openwork decorative details in accordance with the latest stylistic trends.

The aim of the article is also to show the connections between what is local and traditional and what is modern and innovative. An attempt was made to answer the following questions: Is a contemporary detail a reference to historical forms? How to draw on the patterns of previous eras, while adapting them to new trends in architecture and the needs of users? To what extent does the small scale of ceramic elements influence the shaping of architecture and its details? Does the ceramic material have a greater impact on the sculptural character of architecture?

Research methodology

At the research stage, the comparative method was used to analyse the documentation and literature on the subject, followed by the field research and case studies covering the period after the economic transformation in 1989 in Upper Silesia.

Research techniques used:

- source query,
- comparative analysis of completed architectural objects,

- field inspection – author’s photographic documentation.

On the basis of a broader recognition of the architecture of Upper Silesia (“Murator”, “Architektura i Biznes”, scientific literature), two examples in each category from sacral objects, residential buildings, and public utility buildings were selected.

The following selection criteria were used:

- objective criterion of the architectural community: awards granted by the professional community, publications in recognized professional journals,
- representativeness of the object assessed by the professional environment,
- high architectural value of the building also assessed by the professional community,
- cultural recognition of the object assessed by the Upper Silesia inhabitants.

State of the research work

Among the foreign magazines on brick architecture, it is worth mentioning the magazine published twice a year in Denmark, Germany and Great Britain: “Petersen TEGl. A magazine about brickwork and responsible architecture”. The problem of a detail on brick façades has also appeared many times in German magazine “Detail”, published since 1961. Articles on brick architecture are also often published in British journal “Architectural Design”. This issue is also discussed in books such as: *Materials for architectural design 2* by Victoria Ballard Bell and Patrick Rand [2] or *Architecture & materials* by Cristina Paredes Benitez [6]. The most interesting contemporary projects in Silesia using brick were described by Aleksander Serafin in the article *Ekspresja ceglanych elewacji na przykładzie architektury niemieckiej i austriackiej* [Expression of brick façades on the example of German and Austrian architecture] [7]. Contemporary Polish architecture against the backdrop of global trends was extensively presented by Nina Juzwa and Jakub Świerżawski in their book *Myśli, marzenia, miejsca. Architektura polska w innowacyjnej współczesności* [Thoughts, Dreams, Places. Polish architecture in innovative contemporaneity] [8], and presented in a historical context by Ewa Węclawowicz-Gyurkovich in the study *Architektura najnowsza w historycznym środowisku miast europejskich* [Latest architecture in the historical environment of European cities] [9]. The above-mentioned publications discuss current trends in brick design, both in the world and in Poland, especially in Upper Silesia.

Since 2004, every two years, the supplier of building materials and infrastructure solutions, Wienerberger AG, has organized an international competition called Brick Award for the authors of the most interesting architectural concepts. The competition puts emphasis on using the traditional building methods and materials in architecture, and the cultural context, thus enabling a broad presentation of brick architecture and the architects related with it. The most interesting and awarded projects are discussed in a series of books by Callwey entitled Brick.

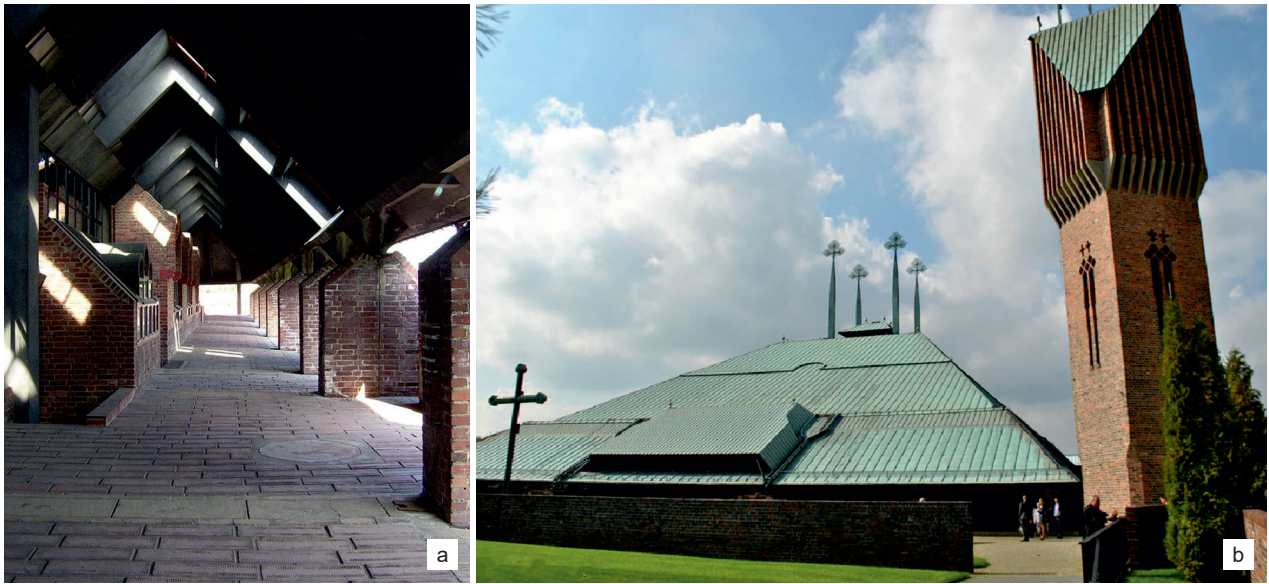


Fig. 1. Church of the Holy Spirit in Tychy:
a) brick arcades – cloisters, b) view of the tower from the north
(design by S. Niemczyk, photo by J. Juroszek)

Il. 1. Kościół Ducha Świętego w Tychach:
a) ceglane podcienie – krużganki, b) widok na wieżę od strony północnej
(proj. S. Niemczyk, fot. J. Juroszek)

The Polish edition of the Brick Award competition has been announced since 2013, and its results are discussed in magazines “Architektura Murator” and “Architektura i Biznes”.

Results of review of architectonic objects

The following objects were selected to present the trends in Silesian brick architecture at the turn of the 20th and 21st centuries: Church of the Holy Spirit in Tychy, Church of Jesus the Redeemer in Czechowice-Dziedzice (religious buildings), Osiedle nad Jamną in Mikołów, Dom Rudy in Rudy (residential buildings), buildings of the “Symfonia” Center for Science and Musical Education and the historic Królowa Luiza [Queen Louise] mine in Zabrze (public buildings).

Church of the Holy Spirit in Tychy (1978–1982)

The most outstanding brick buildings in Silesia include the Church of the Holy Spirit at 43 Myśliwska Street, in the Żwaków district in Tychy. This is one of Stanisław Niemczyk’s first sacral projects (before that, he worked for Miastoprojekt Tychy for many years).

The body of the church refers to the “first temple of the chosen people” [10] and brick is its main decoration, suggesting many, also oriental, associations. At the top of the squat roof there are four small crosses. The architect referred here to the symbol of the Old Testament tent and to “Soboty”, deep arcades surrounding wooden churches. The designer also used wood and reinforced concrete in a phenomenal way. He also designed the furnishings of the church.

Stanisław Niemczyk reached for two inspirations. On the one hand, it was a form of a wooden temple, characteristic of the south of Poland, in which the roof is a significant part of the body. On the other hand, the architect created, in accordance with the requirements of the Second Vatican Council (1962–1965), an object on a central plan, giving the congregation the best chance to stay close to the altar.

The church in Tychy resembles a large tent with an interior in the form of a vast, open space. It is compared to those erected by pilgrims in the times of early Christianity. The brick walls are practically invisible from under the huge, hip roof covered with metal sheet. Through the skylight in the roof, a stream of natural light enters the chapel on the lower level through the glazing in the floor of the presbytery. This endeavour is to symbolize the connection of Heaven and Earth.

The arrangement of bricks in the church walls over time became Niemczyk’s hallmark [11, p. 260]. Brick, as in most of the artist’s projects, is a sculptural and painting element, which the architect skilfully plays with. This can be seen both in the brick arcades – cloisters (Silesian “Soboty”), and in the ceramic bell tower, on each side of which there are two carved Byzantine crosses, above which there are modern brick niches (Figs. 1a, b).

Church of Jesus Christ the Redeemer in Czechowice-Dziedzice (1998)

The typical Silesian breath can also be found in Stanisław Niemczyk’s later work. It is the church of Jesus Christ the Redeemer at 23 Pocztowa Street in Czechowice-Dziedzice.

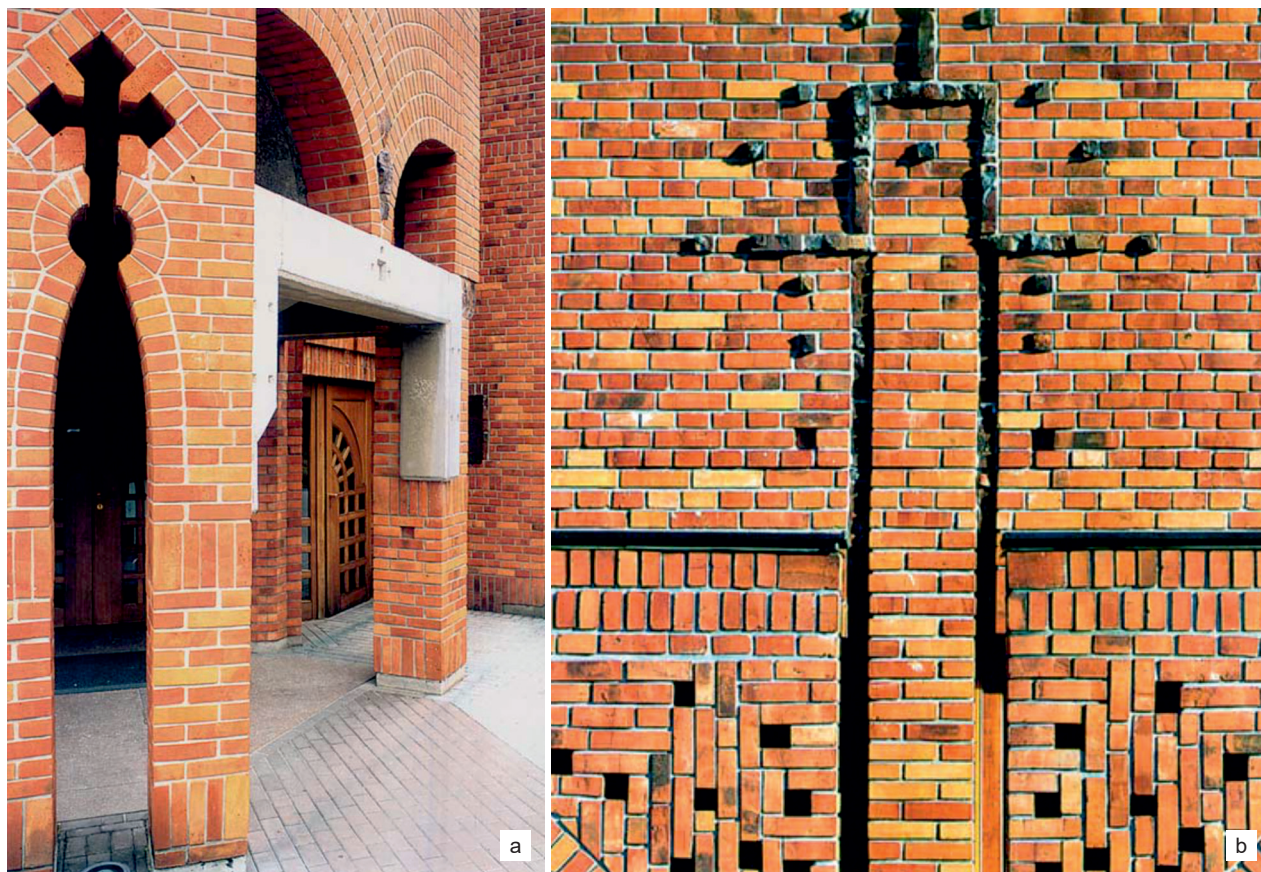


Fig. 2. Church of Jesus Christ the Redeemer in Czechowice-Dziedzice:
 a) main entrance to the church, b) main entrance to the church – a dark brick cross
 (design by S. Niemczyk, photo by J. Juroszek)

Il. 2. Kościół Jezusa Odkupiciela w Czechowicach-Dziedzicach:
 a) wejście główne do kościoła, b) wejście główne do kościoła – krzyż z ciemnej cegły (proj. S. Niemczyk, fot. J. Juroszek)

The church is built almost exclusively of brick, only a few elements: foundations, lintels, beams supporting the roof, etc., are made of concrete, usually left unfinished. The brick from which the church was erected comes from a brickyard one and a half kilometres away in the village of Bestwina. Materials important for the general view, basically unheard of, are the brick rejects, burnt bricks, sometimes differing only in colour, sometimes completely melted and resembling a piece of solidified lava. From them, on the principle of marquetry in the wall, an architectural detail is made. The details are also holes in the wall of various sizes, clearances, openwork, as well as patterns created from the arrangement of bricks. There are a lot of details in the church of Jesus the Redeemer in Czechowice-Dziedzice, but you certainly do not feel excess, because it is a very simple, economical detail: a protruding brick, a few bricks arranged differently, a cross made of four or five bricks, a small hole. One gets the impression that no place in the church has been omitted – each one is appreciated with the help of a detail, even the simplest one (Figs. 2a, b). Nothing is mechanically repeated, copied, like perforation with identical holes multiplied a million times. The church has a triangular plan, the base of which stands diagonally on a narrow plot – thanks to this, the bigger dimension of the building was obtained.

The entire object is both simple and very irregular, different from every perspective. The side walls are patchy – it's just a brick wall enlivened by inlays made of burnets, suggesting partly a window, partly a cross. The lower part of the wall facing the street is occupied by windows illuminating the interior. Between them and the street there is a fence separating the interior from the traffic. The rear wall with the apse has a less regular shape, but it is not exposed at all – right behind it stands the parish house, built earlier, independently of the church. The sacristy separated from the church body, the outer wall of which is covered with marquetry recalling the tablets of the Decalogue and the shape of a tree is also a characteristic element of the whole. All this is conjured up invariably from a typical brick.

The church grounds are surrounded by a brick fence. This fence is open – it has clearances and wide passages devoid of any fence. The meaning is clear: it is not about separating, but about designating a place of sacrum. Such open walls or fences around churches are a constant motif of Niemczyk's architecture. The interior of the church is single-space, without divisions. Like the exterior, it is basically brick with a few concrete elements. From the inside, it is much better to see that the church is small (cubage 4850 m³). Apart from the windows in the wall facing the street and in the ceiling, the only sources of

natural light are the glazed entrance door and a few small windows at the choir level. As explained by S. Niemczyk in one from his interviews, [...] *the point is not that I built the wall. I bite into space out of necessity [...]. So architecture is not this wall, architecture is this space, where we can consume architecture* [12, p. 33]. Niemczyk trusts only the natural materials, which he considers the only ones worth of sacred space. These are unprocessed materials that intuitively allow themselves to be recognized by everyone. Stone is stone, wood is wood, glass is glass. They do not imitate anything, they do not pretend or manifest anything. With their skilful arrangement and application, they age gracefully and with dignity.

The parish complex was mainly made of bricks fired in the local brickyard, including burnt bricks considered unfit for use. Meanwhile, the way it is arranged creates an unusual composition, transforming the drawing of flat walls into a multi-coloured mosaic enlivened by changing chiaroscuro. Surprising, seemingly random patterns hide a symbolic content. Here and there, there is a drawing of a cross, tablets of the Decalogue, and in other places – the Tree of Life. The brick has a base that is usually not shown. Niemczyk, however, passionately reveals this seemingly contaminated surface, because, as he says, it [...] *has expression, it bears the traces of builders' fingers ... Just like baked bread, which tastes best from the bottom* [13, p. 3].

Housing estate over the Jamna River in Mikołów (1983–1986)

Another worth mentioning example of one of designs by Stanisław Niemczyk is this time an example of brick residential architecture. In Mikołów, he designed a hous-

ing estate referring to universal, timeless architectural values. The buildings were composed between the valley of the Jamna River and two diagonal streets. The buildings were situated parallel or perpendicular to both arteries. On the other hand, a ribbon character was given to the internal pedestrian route with a housing estate agora in the middle, reminiscent of a river current.

Each house in this estate is different, although at first glance they all seem to be the same. *The windows arrangement, the shapes of the staircase entrances and numerous bay windows and metal divisions with triangular toppings of balcony loggias, which are an original reinterpretation of porches, called in Silesia "the laubs", differ them* [14, p. 35].

A dozen or so residential buildings (12 to be exact) composed of narrow segments were placed there on a terrain of varying heights. In this way, an intimate, cosy space was created between the buildings and was made more attractive by numerous squares, platforms with benches, passages, stairs and side streets (Figs. 3a, b).

The area, while maintaining a human scale, has acquired picturesque features – it is caused by differences in the height of the buildings foundations, hidden passages, numerous nooks and crannies, platforms shaped like observation decks, and even "labyrinths" composed of high hedges.

Before the project in Mikołów, Niemczyk had already completed a number of unconventional projects. At the end of the 1970s, when blocks of flats were popular in Silesia, only Niemczyk used the same prefabricated elements to build on a human scale, referring to the characteristic red brick houses located nearby.

Anna Cymer wrote that [...] *the Mikołów housing estate gives the impression that it exists outside of time and outside the region; looking at the pictures, it is easy to*

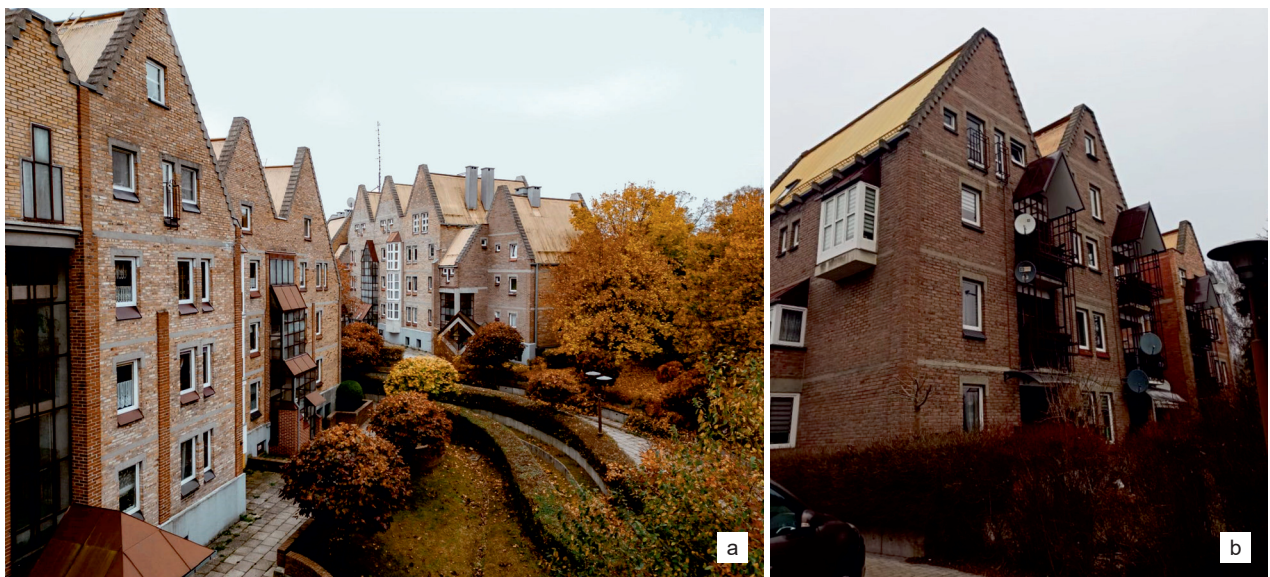


Fig. 3. Housing estate over the Jamna River in Mikołów, inner courtyard:
a) view from the east, b) view from the northeast
(design by S. Niemczyk, photo by J. Juroszek)

Il. 3. Osiedle nad Jamną w Mikołowie, wewnętrzny dziedziniec:
a) widok od wschodu, b) widok od strony północno-wschodniej (proj. S. Niemczyk, fot. J. Juroszek)



Fig. 4. Rudy House in Rudy:
 a) façade from the east,
 b) detail from the north
 (design by M. i K. Wawrzyniak, photo by J. Juroszek)

Il. 4. Dom Rudy w Rudach:
 a) elewacja od strony wschodniej,
 b) detal od strony północnej
 (proj. M. i K. Wawrzyniak, fot. J. Juroszek)

assume that it was created in Great Britain or the Netherlands, both in the 19th and 21st centuries [15, p. 268]. Meanwhile, this is Upper Silesia.

Niemczyk reflects the human scale in the material he uses to create the façade. He plays with the colour, structure and form of the brick. The façades are not flat – the artist divides them and arranges them with colourful pilasters protruding from the wall face. The brick used for this project has different colours and Niemczyk uses this to treat the façade as a painting on canvas. The small scale of the

brick is justified in each element, so that the objects match with the small-town architecture of Mikołów (Figs. 3a, b).

Dom Rudy (Rudy House) in Rudy (2017)

Another interesting example of brick housing is Dom Rudy designed by Marek and Karol Wawrzyniak from 2017. The house is located in the town of Rudy, in the Kuźnia Raciborska commune, in the picturesque Racibórz Valley, on the Ruda River, at the intersection of the roads Racibórz–Gliwice and Kuźnia Raciborska–Rybnik–Knurow. *The building is close to a forest that is part of the largest landscape park in Poland, called Cistercian Landscape Compositions* [16, p. 72].

Dom Rudy in Rudy (it is worth paying attention to the play on words taking into account at the same time the name of the town, in Polish the red colour of the house itself (*rudy* means red in Polish as well as the colour of extracted ore) attracts attention with an unusual way of using the bricks. The building material becomes the subject and, at the same time, an expressive artistic form that makes this project unique in its category. In the project of a single-family house in Rudy, brick has become something more than a building material. The façade of the house is extremely expressive, despite the familiar ways of using brick. The architects use the building material in an unusual way: they used a unique detail in the walls – their own variation of a cross-stitch thread with vertical heads, which are pushed out on one side and pressed in against the face of the wall on the other. This simple procedure significantly enriched chiaroscuro effect on the façade. By completely removing the same pair of bricks, an openwork wall was created, hiding window openings that diversify the uniform/repeatable structure of the façade. At night, with little or no artificial lighting, the openwork starts to light (Figs. 4a, b).

The form of the house emerged from the transformation of a cuboid, when a square was cut out from the basic body. In its place, an introverted, closed courtyard was arranged, which separates the entrance area from the road and the rest of the estate. Empty space, obtained after cutting out a cube, finds its antithesis in a gable roof, superimposed on a model of a simple cube. Thus, the architects achieved the effect of a game between emptiness and solid, concave and convex forms. The traditional form of a single-family house, covered with a gable roof, has been integrated into a modern, architectural layout. The same happened with brick – a traditional building material whose colour, texture, shape and arrangement are the leitmotiv of the entire project. Looking for a building material best suited to the character of the place where the house was to be built, the architects found the last, still operating local brickyard. The clay used to build the house is almost the same colour as the ground on the plot. All colours of the brick appear on the façade. Traditional firing methods allowed obtaining a whole range of warm colours – from bright orange to deep violet, close to black. Many hand-sorted waste bricks were used to build the house. Working with local materials usually gives the most natural results. Relying on readily available, local materials is ecological and in line with



Fig. 5. Science and Music Education Centre “Symfonia” in Katowice:
a) façade from the west, b) detail inside the building
(design by T. Konior, K. Barysz, A. Witkowski, A. Nowacki, photo by J. Juroszek)

Il. 5. Centrum Nauki i Edukacji Muzycznej „Symfonia” w Katowicach:
a) elewacja od strony zachodniej, b) detal wewnątrz budynku (proj. T. Konior, K. Barysz, A. Witkowski, A. Nowacki, fot. J. Juroszek)

the principles of sustainable development. *Dom Rudy is a building where the simplicity of shaping the projection, manipulating the shapes and light, and creating non-obvious connections between floors, inspires with minimalist European and Japanese architecture. At the same time, striving to use local products with the smallest possible carbon footprint and creating the relationship with nature is a search for a new way in architecture in a globalized world of typical solutions* [16, p. 73].

Science and Music Education Centre “Symfonia” in Katowice (2014)

The building, which was erected to expand the seat of the Karol Szymanowski Academy of Music in Katowice, for the needs of the new Centre for Science and Music Education “Symfonia”, seems to be a characteristic Silesian architecture object. The building is located at 3 Zacisze Street in the very centre of Katowice. It is an extension of the existing, historic main building of the Academy, creating a continuation of the frontage of Damrota Street in Katowice.

The new layout was designed by the Konior Barysz Architekci studio (after 2005, work was continued at Konior Studio). The existing two buildings were connected and supplemented with a concert hall with facilities and an administrative part.

Tomasz Konior, Krzysztof Barysz, Andrzej Witkowski and Aleksander Nowacki were the authors of the extension building who strived to create a modern facility that would be a formal and functional, but also creative continuation of the surroundings. At a short distance, along the rear façade of the main historic building, a slightly lower cuboid shape was added (library and administration part), and the space left between them was in the form of a glass atrium. Thanks to this, the very decorative neo-Gothic façade of the old building was inside. Two independent,

differently accentuated entrances have been designed in the new facility – for students from the side of a small courtyard and for the concert audience from Damrota Street. Along this street, at right angles to the atrium, a concert hall was situated, with a width precisely resulting from the architectural divisions of the Academy seat.

To preserve the atmosphere of the place and additionally unify the complex, the façades of the new parts were made of carefully selected bricks, referring to the surrounding buildings. Single bricks irregularly protruding 2–3 cm on the surface of the entire façade break the austerity of the body and give the university a modern look. The windows were placed in narrow elongated niches, reminiscent of a Gothic architectural detail. The large planes of the walls without openings were enlivened with a small irregular ornament made of protruding bricks (Figs. 5a, b). The interior is also dominated by brick supplemented with concrete. The architects refer to the interior of the building’s façade and smoothly play with every architectural detail. The spaciousness of the walls and the light that reaches the interior at different times of the day means that we can always admire the play of chiaroscuro and the painterly character of this timeless material.

Revitalization of the chain bathhouse of the historic Królowa Luiza [Queen Louise] mine in Zabrze (2015)

Revitalization of the building of the former chain bathhouse with the intention of using it as a reception point of “Królowa Luiza Adit”, i.e. a several-kilometre-long tourist route under the city centre, was one of the characteristic features of Silesia. The building is located in Zabrze at 408 Wolności St., which is the main thoroughfare of the city. The authors of the project of the revitalization of the chain bathhouse are Tomasz Konior and Barbara and Oskar Grąbczewski.



Fig. 6. Revitalization of the chain bathhouse of the historic Królowa Luiza mine in Zabrze:
a) façade from the east, b) interior of the building
(revitalization project by T. Konior, B. and O. Grąbczewski, photo by J. Juroszek)

II. 6. Rewitalizacja łaźni łańcuskowej w zespole zabytkowej kopalni Królowa Luiza w Zabrzu:
a) elewacja od strony południowej, b) wnętrze budynku
(proj. rewitalizacji: T. Konior, B. i O. Grąbczewscy, fot. J. Juroszek)

Designers inspired by the Iberian thinking about the façade as a mashrabiya protecting against the sun created an arcade with lots of small openings creating a composition on the façade. The play of lights coming out of the openings of the building creates a harmonious play of chiaroscuro on the simple shape of the building.

A one-story, brick basilica building, erected at the end of the 19th century, served as the so-called chain cloak-room, a bathhouse and a marks room. *In the first room, miners left their clothes hanging them at the ceiling on hooks equipped with chains, and in the last one they collected marks, i.e. plaques with an individual number, thanks to which it was known if the worker had gone up to the surface after work. When the mine was closed down in 1998 and its buildings were used as the Coal Mining Museum, the bathhouse was used as a gallery and event venue. The new function of the facility required adapting it to handle tourist traffic of quite high intensity. A souvenir shop, a helmet warehouse and a room for guides were planned here, as well as a restaurant with facilities and a multi-purpose room* [17, p. 62]. The facility that had been used by miners during the mine operation time, was adapted under the supervision of the conservator of monuments. From the outside, apart from cleaning the façade and building two small extensions on the side of the gable walls, the building has not undergone significant changes. No major revolutions were made in the interior either. Here, too, the walls were cleaned, partly uncovering their redevelopment, partly rebuilding the walls with bricks recovered during the revitalization. Thanks to this, the building gained an additional narrative telling about the reconstructions it has undergone over the years. Here, the detail has become a combination of modern thinking with the existing post-industrial urban fabric. The existing

building features rhythmically composed pilasters, ryalit and windows finished with a three-dimensional brick frieze. The foundation was also finished with a modernist cornice typical of the Bauhaus period. The building tells its own story. A modern added lampshade gives lightness to historical architectural details and makes the body take on a new, present-day character (Fig. 6a, b).

Discussion

The examples of architecture, mentioned by the author constitute their own, unique style – the style visible in each element that is not subordinated to the search for originality. There is a lot of detail using bricks in contemporary architecture and it is generally thought out and applied in moderation. It is a simple, economical detail: a protruding brick, several bricks arranged differently, a cross made of five or six bricks, a small hole. It is the use of appropriate chiaroscuro, texture and colour, just like in contemporary sculpture or painting. *Texture of the brick, i.e. the material as such, is important when we look at it very close, from a distance of about thirty or forty centimetres. From a distance of one or two meters, it doesn't count because the brick pattern appears on the wall. From such a distance, it becomes the texture of the wall and it reveals the designer's intention* [7, p. 25]. Among the elements characterizing a contemporary detail, we can find [...] *building the simple archetypal geometric forms drawn from tradition, in which references to the past are visible, but clearly schematic and simplified* [...]. *Provocative entanglements and clashes of forms, growing out of fragments of geometric solids, rotated, transformed as part of a previously planned chaos and apparent randomness, do not repeat the compositions*

known to us from the past, they are fresh, dramatic and surprising [9, p. 98].

Thanks to the eight-hundred-year tradition of using the brick for building, the modern constructing industry, inspired by historical styles, generates new spatial creations. Using the changing chiaroscuro and texture, it satisfies new aesthetic and visual needs. Brick architecture, like any other art, has undergone transformations over the years of experience, in accordance with the needs of society, without losing its artistic values. The wide range of colours of the brick and the fact that it is a natural, ecological and practical material, adapted to any compositional scale, made it timeless. Despite the changing landscape around us, the universality and multidimensional potential of brick still inspires. In Silesia, brick is a symbol of economic prosperity, it is associated with the construction of the first mines, workers' housing estates, churches and public buildings. *The space in architecture, created to raise human needs, is strongly related to the emotionality of human experiences* [8, p. 96]. It was with the use of solid brick that the first working-class housing estates in Silesia were built (e.g. Nikiszowiec in Katowice). In such places, the colours of the bricks are often combined with green and red, as a reference to the two colours in which window sills and window frames are painted in Silesian familoks (multi-family houses): traditionally, metallurgist windows are green, miners windows are red. The detail of brick architecture has changed over the years, but the sculptural character, geometrization and plasticity have remained unchanged.

The role of brick façades in the cultural aspect seems to be important in the cultural aspect [7, p. 26], because *contemporary sources of inspiration in the way of surface shaping introduce a new meaning to the reality of architecture. Characteristic patterned surfaces – changing costumes of buildings create unlimited perspectives in the 21st century. They act as filters separating from each other and at the same time connecting two sides – form and context, partially showing the structure of the interior, partially covering it* [18, pp. 124, 125].

Brick has always been considered a simple but solid building material. Over the years, it has acquired nobility and elegance. Carefully crafted, purposefully finished bricks with a specially designed detail, were used to build ordinary houses, as well as churches and palaces. Originally, brick served as a structural element, with time it acquired a painterly and sculptural character. The discussed phenomenon also applies to Poland, but only a few publications concern this topic. *Silesian architects try to continue local traditions* [19, p. 23]. This traditional raw material fits perfectly into the modern style, and at the same time as an ecological material, it allows the erection of buildings in compliance with the principles of sustainable development. This material has “breathing” properties, i.e. it ensures free flow of water vapour in the wall, eliminating the risk of condensation and accumulation of moisture. In addition, it is resistant to fungi and mould, so in the era of numerous allergenic products, it is a very hygienic material. The use of ceramics allows maintaining the favourable microclimate inside rooms. An undoubted

advantage of building ceramics, which other materials do not have, is the possibility of its repeated use, which allows to reduce the amount of possible waste. Due to the fact that it is a material made entirely of renewable raw materials, it can be recycled. In turn, the development of the production of porous ceramics allows to achieve a high level of energy efficiency. The use of ceramic hollow bricks means that there is no need to use an additional layer of thermal insulation, and the reduction in a variety of materials reduces the investment costs.

In addition to ecological properties, ceramics have unique aesthetic values. The multitude of shapes, formats and colours allows achieving the excellent visual effects. *Popularity of a brick as a contemporary architectural material results from its dualistic potential, manifested in the possibility of using it both as a structure and as a filling* [20, p. 170].

The use of this building material allows for a contemporary interpretation of art, without duplicating historical forms, only using the tradition in local culture. Contemporary architects discover new beauty, new possibilities, new rules, new geometric variations of the timeless brick.

Summary

The examples presented in the article prove that Silesian brick architecture has survived historical cultural changes. Innovative solutions used by architects make brick take on a modern character. A modern detail is no longer just a construction and decorative material, but often takes the form of openwork curtains, creating semi-closed architectural interiors. The colour scheme of adjusting the detail to local conditions results from the needs and sentiment of the inhabitants. The detail from heavy geometric forms was turned into light, semi-transparent walls that fit in the latest architectural trends and the users' needs. Dom Rudy (Rudy House) in Rudy designed by Marek and Karol Wawrzyniak or the Church of Jesus the Redeemer in Czechowice-Dziedzice designed by Stanisław Niemczyk, where a fence or towers with clearings illuminate the interiors and leave them open, can be good examples.

The detail has become a modern interpretation of historical patterns. It does not duplicate medieval forms, does not imitate the past, but using a modern language it extracts from this material what made it valued for centuries. In the reconstructed buildings, brick from the symmetrical, regular forms creates asymmetrical compositions that give a new tone in the existing context. Revitalization of the chain bathhouse in the complex of the historic Królowa Luiza mine in Zabrze, designed by Tomasz Konior and Barbara and Oskar Grąbczewski, where the asymmetrical entrance to the building superimposed on the rhythmic fabric of the one-story basilica building creates a new, unique narration of the body, is an example. Historic brick buildings often tell their story in a silent way. Designing the context for them in a modern form, with an innovative architectural detail, makes the building take on a new character. Properly designed lighting in buildings emphasizes the chiaroscuro of each block and brings out the so-called

third dimension – characteristic of the Bauhaus period. Flat walls with a composition of openings or fragments of protruding bricks, with the appropriate use of light, are like a picture painted on canvas, a modern sculpture, as simple as modernist, ascetic architecture. A good example of this are the objects designed by Tomasz Konior. Small dimensions of the brick mean that every detail can be used both in residential and sacral buildings, as well as in public buildings. Every one of them, on a different level and in a different context, brings out the best from the existing cultural landscape. In Silesia, there are many objects of brick architecture forming the legacy of post-industrial achievements. The existing urban fabric makes Silesian architects look for new narratives, new architectural solutions, new variations and interpretations of brick details.

The architectural examples mentioned above prove that they are able to extract new beauty, new skin and a second life for the symbols of the cultural heritage of Upper Silesia from the existing context.

Local land development plans often include provisions and conditions giving preference to noble materials such as stone, wood and brick. Today, it is brick that dominates most of the adopted solutions, successfully fitting into modern eco-trends.

In Upper Silesia, brick is inscribed in the existing urban texture and is an inseparable element of cultural heritage.

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Abstract

The role of a brick detail in architecture on the example of contemporary architectural trends in Upper Silesia

An image of the changing trends in the design of ceramic architectural details in Upper Silesia in recent years is the subject of the study. At the research stage, a source query, analysis of completed architectural objects, field inspection and photographic documentation were used. On the basis of a broader recognition of the subject, two examples were selected from the sacral buildings, residential buildings and public utility buildings. Assessment of the architectural environment, representativeness of the building, high architectural value, and cultural recognition were the selection criteria. Showing that the contemporary architecture of Upper Silesia allows operating with chiaroscuro, which gives the composition a “third dimension” – uniqueness and specific expression is the goal that the author achieves. It is not reaching for historical patterns, but creating new, geometric, spatial forms, setting new composition rules, using chiaroscuro, painterly and sculptural features of this timeless material. The human scale of the module means that bricks can be used to design almost any architectural object: a residential building, as well as a sacral or public utility building. Contemporary brick is no longer used only to create structural elements – it is part of the image composition, relief and sculpting of each façade.

Key words: detail, brick, brick architecture, composition, Upper Silesia

Streszczenie

Rola ceglanego detalu w architekturze na przykładzie współczesnych trendów architektonicznych na Górnym Śląsku

Tematem pracy jest obraz zmieniających się w ostatnich latach trendów w projektowaniu ceramicznego detalu architektonicznego na terenie Górnego Śląska. Na etapie badań posłużono się kwerendą źródłową, analizą zrealizowanych obiektów architektonicznych, wizją terenową oraz dokumentacją fotograficzną. Na podstawie szerszego rozpoznania tematu wytypowano po dwa przykłady spośród obiektów sakralnych, budynków mieszkalnych oraz obiektów użyteczności publicznej. Jako kryteria wyboru posłużyły ocena środowiska architektonicznego, reprezentacyjność obiektu, wysoka wartość architektoniczna, rozpoznawalność kulturowa. Celem autorki było wykazanie, że współczesna architektura Górnego Śląska pozwala operować światłocieniem, który nadaje kompozycji „trzeci wymiar” – wyjątkowość i specyficzny wyraz. Nie jest to sięganie do wzorców historycznych, lecz tworzenie nowych, geometrycznych, przestrzennych form, ustalanie nowych zasad kompozycyjnych, operowanie światłocieniem, malarskością i rzeźbiarckością tego ponadczasowego materiału. Ludzka skala modułu sprawia, iż cegły można użyć do projektowania niemal każdego obiektu architektonicznego – zarówno budynku mieszkalnego, jak i sakralnego lub użyteczności publicznej. Współczesna cegła nie służy już tylko i wyłącznie do tworzenia elementów konstrukcyjnych – jest częścią kompozycji obrazu, reliefu i rozrzeźbienia każdej elewacji.

Słowa kluczowe: detal, cegła, architektura ceglana, kompozycja, Górny Śląsk

